The Idaho National Engineering and Environmental Laboratory

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FY 1998 Technology Deployment in Environmental Management

Solutions of the Future at the INEEL

Site Technology Coordination Group
U.S. Department of Energy, Idaho Operations Office

INEEL

In Situ Sampler at TAN

Problem: *Trichloroethylene (TCE) contamination in groundwater is difficult and expensive to detect.*

Baseline Technology: *A packer system is used to obtain a vertical distribution of groundwater samples in a well and the TCE concentration is determined through off-site laboratory analysis.*

Innovative Technology: *The INEEL developed In Situ Sampler (ISS) uses a permeable membrane which adsorbs TCE from the groundwater. ISS probes are lowered into a well and analyzed on site to determine TCE concentrations.*

Comparison: *It is simple to use, inexpensive, and provides quick results. In addition, large volumes of purge water required for the baseline which must be treated as hazardous waste are eliminated.*

Cost Savings: *A typical contamination profile obtained with the baseline costs $150 K, as compared to $80 K using the ISS.*

In Situ Sampler at TAN